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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,612	03/30/2006	Marc Daneau	273941US2XPCT	4838
22850	7590	08/10/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			TRAN, BINH Q	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/539,612

Applicant(s)

DANEAU ET AL.

Examiner

BINH Q. TRAN

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/17/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Receipt and entry of Applicant's Preliminary Amendment dated March 30, 2006 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 11-20 are rejected under 35 U.S.C. 102 (b) as being anticipated by Nada (Patent Number 5,172,320).

Regarding claims 11 and 16, Nada discloses a method and apparatus for control of an internal combustion engine (1) to regenerate an exhaust-gas purifying mechanism disposed on an exhaust line of the engine, comprising: analyzing a composition of exhaust gases solely downstream from the purifying mechanism during a phase of regeneration of the purifying mechanism, and creating a signal for control of the engine based on the analysis to modify the composition of the exhaust gases upstream from the purifying mechanism (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

Regarding claim 12, Nada further discloses that the composition of the exhaust gases is analyzed by an oxygen sensor (14) of all-or-nothing type situated downstream from the purifying mechanism (12) (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

Regarding claim 13, Nada further discloses that an operating temperature of the oxygen sensor is controlled (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

Regarding claim 14, Nada further discloses that the an output signal of the oxygen sensor is compared with a reference value, and a control signal is created to reduce the difference between the output signal of the oxygen sensor and the reference value (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

Regarding claim 15, Nada further discloses that the an end stage of the regeneration phase is detected based on the control signal (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

Regarding claim 17, Nada further discloses that the oxygen sensor is of all- or-nothing or proportional type (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

Regarding claim 18, Nada further discloses means for controlling an operating temperature of the oxygen sensor (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

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Regarding claim 19, Nada further discloses that the a detection module configured to detect an end of a regeneration phase as a function of a control signal produced by the control module (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

Regarding claim 20, Nada further discloses that the purifying mechanism comprises a nitrogen oxides trap (e.g. See col. 3, lines 20-67; col. 6, lines 6-59).

Claims 11-20 are rejected under 35 U.S.C. 102 (b) as being anticipated by Katoh (Patent Number 5,483,795).

Regarding claims 11 and 16, Katoh discloses a control device and method for regeneration of an exhaust-gas purifying mechanism disposed on an exhaust line of an internal combustion engine (1), comprising: a control module (30) configured to modify fuel injection, and an oxygen sensor (22) disposed on the exhaust line directly downstream from the purifying mechanism (18); wherein, during a phase of regeneration of the purifying mechanism, the control module is configured to cause a modification of a composition of exhaust gases solely as a function of an output signal of the oxygen sensor (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Regarding claim 12, Katoh further discloses that the composition of the exhaust gases is analyzed by an oxygen sensor (22) of all-or-nothing type situated downstream from the purifying mechanism (18) (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Regarding claim 13, Katoh further discloses that an operating temperature of the oxygen sensor is controlled (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Regarding claim 14, Katoh further discloses that the an output signal of the oxygen sensor is compared with a reference value, and a control signal is created to reduce the difference between the output signal of the oxygen sensor and the reference value (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Regarding claim 15, Katoh further discloses that the an end stage of the regeneration phase is detected based on the control signal (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Regarding claim 17, Katoh further discloses that the oxygen sensor is of all- or-nothing or proportional type (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Regarding claim 18, Katoh further discloses means for controlling an operating temperature of the oxygen sensor (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Regarding claim 19, Katoh further discloses that the a detection module configured to detect an end of a regeneration phase as a function of a control signal produced by the control module (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Regarding claim 20, Katoh further discloses that the purifying mechanism comprises a nitrogen oxides trap (e.g. See col. 11, lines 20-67; cols. 12-14, lines 1-67; col. 15, lines 1-42).

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of five patents:

Itou et al. (Pat. No. 6167695), Pfleger et al. (Pat. No. 56347513), Ketterer et al. (Pat. No. 6314723), Hahn (Pat. No. 6408615), and Miyashita et al. (Pat. No. 7000385) all disclose an exhaust gas purification for use with an internal combustion engine.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



BT
August 04, 2006

Binh Q. Tran
Patent Examiner
Art Unit 3748